UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,442	10/11/2001	Jennifer Anne Dervin	IBM / 204	9166

7590 08/23/2005	**EXAMINER**
Scott A. Stinebruner	REID, CHERYL M
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441 Vine Street	2142
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DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/975,442	DERVIN ET AL.
	Examiner	Art Unit	
	Cheryl M. Reid	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _18 June 2005_.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-31_ is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-31_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

  1. ☐ Certified copies of the priority documents have been received.

  2. ☐ Certified copies of the priority documents have been received in Application No. _____.

  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _01/16/02_.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-31 have been examined.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2.   Claim 18 is rejected under 35 U.S.C. 101 because the claim is directed to non-statutory subject matter. Claim 18 is not limited to tangible embodiments. In view of Applicant's disclosure, specification page 12, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments and intangible embodiments. As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

Response to Arguments

3.   Applicant's arguments with respect to claim 1- 31 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1,2,3,5,6,7,8,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Souza (US 6453468) hereinafter D'Souza and Eitner et al (US 6070012) hereinafter Eitner, and further in view of Shrivastava et al (US 6163855) hereinafter Shrivastava.

6.   In regards to claim 1, D'Souza teaches of updating the cluster infrastructure software from a first version to a second version in individual nodes in the clustered computer system (Col 7, lines 20-25) , wherein the second version of the cluster infrastructure software has different program code from the first version of the cluster infrastructure software. It is inherent that the program code of the 1st version and the 2nd version are different. D'Souza does not explicitly teach of the remaining limitations. In an analogous art, Eitner teaches updating while the group is maintained in an active state (Col 4, lines 49-53). Eitner also does not explicitly teach of the remaining limitations. Shirvastava teaches of notifiy the group of the update to the cluster infrastructure software (Col 6, lines 27-42) and dynamically updating a cluster infrastructure version used by the group to that of the updated cluster infrastructure software. It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teachings of Eitner and Shrivastava because the inventios relate to modifications of cluster systems. One of ordinary skill in the art at the time of invention would have been motivated to make the above-mentioned modifications for

the reasons discussed by Shrivastava (Col 1, lines 52-56) and Eitner (Col 2, lines 1-

10).

7.   In regards to claim 3, D'Souza teaches of updating cluster infrastructure software

(Col 7, lines 20-23) and but is silent in regards to notifying groups resident in the cluster

computer . Shrivastava teaches on this aspect (Col 6, lines 19-40). See claim 1 for

motivation.

8.   In regards to claim 6, Shrivastava teaches of sending an ordered message (Col

6, lines 35-40).

9.   In regards to claim 2, D'Souza teaches of upgrading cluster infrastructure

software (Col 7, lines 20-23). It is well known that an upgraded version of a software

has additional functionally.

10.   In regards to claim 7, D'Souza does not teach of the limitations. Shrivastava

teaches of sending a membership change message with an adjust version reason code

(Col 5, lines 27-38 Col 6, lines 42-60).

11.   In regards to claim 8, D'Souza does not teach of the limitations. Shrivastava

teaches of verifying that all nodes are active ((Col 5, lines 15-21) and notifying the group

(Col 6, lines 25-40). See claim 1 for motivation.

12.   In regards to claim 10, D'Souza teaches of verifying that all nodes are capable of

running the updated cluster infrastructure version prior to installation (Col 3, lines 39-

52) but does not explicitly teach of notifying the group. Shrivastava teaches on this

aspect (Col 6, lines 27-41). It would have been obvious to one of ordinary skill in the art

at the time of invention to incorporate the teachings of Shrivastava because the

inventions relate to upgrading or modifications in cluster systems. One of ordinary skill

in the art at the time of invention would have been motivated by the reasons discussed

by D'Souza (Col 3, lines 51-53).

13.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over

D'Souza, Eitner, and further in view of Shrivastava as applied to claim 1 above,

and further in view of Kumar et al (US 6769008).

14.   In regards to claim 9, neither D'Souza nor Eitner teach of the limitations. Kumar

teaches about preventing partitioning (Col 3, lines 15-20) and Shrivastava teaches

about notifying groups (Col 5, lines 25-32). Adding the above-mentioned modifications

would allow effective and efficient reconfiguring of a cluster. It is for this reason that one

of ordinary skill in the art at the time of invention would have been motivated to make

the above-mentioned modifications.

15.   Claim 4 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over

D'Souza Eitner, and further in view of Shrivastava as applied to claim 1 above,

and further in view of Murata.

16.   In regards to claim 4, neither D'Souza nor Eitner nor Shrivastava teach of this

limitation. Murata teaches of shutting down the node, installing cluster infrastructure

software on the node, and restarting the node (Col 2, lines 1-7). See claim 1 for motivation.

17.   In regards to claim 5, D'Souza does not teach of the limitations. Shrivastava teaches of shutting down the node includes removing a member that is resident on the node from the group and wherein restarting the node includes adding the member to the group (Col 5, lines 25-35, Col 9 lines 38-41). See claim 1 for motivation.

18.   Claim 11 ,12,13,15,18 and 19,20,22 rejected under 35 U.S.C. 103(a) as being unpatentable over Shrivastava, and further in view of D'Souza.

19.   In regards to claim 11 and 18, Shrivastava teaches of : a node configured to participate in a clustered computer system (Col 3, lines 12-15, Fig 1) the node having resident thereon cluster infrastructure software (Col 3, lines 50-55) and at least one member of a group (Col 5, line 4, lines 65-67, lines 1-17), program code resident in the node (Col 3, lines 50-53), program code configured to notify the member of an update (Col 6, lines 19-41) and dynamically update a cluster infrastructure version used by the member to that of the updated cluster infrastructure software (Col 6, lines 19-41). Shrivastava does not explicitly teach of wherein the update is from a first version to a second version, D'Souza teaches on this aspect (Col 7, lines 20-25).   It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teachings of D'Souza because the inventions relate to modifications of cluster

systems. One of ordinary skill in the art at the time of invention would have been

motivated to make the above-modifications because upgrading software versions would

result in a more efficient system by providing a system with additional functionalities.

20.   In regards to claim 12 and 19, Shrivastava doesn't teach of the limitations.

D'Souza teaches of upgrading cluster infrastructure software (Col 7, lines 20-23). It is

well known that an upgraded version of a software has additional functionally. See claim

11 for motivation.

21.   In regards to claim 13 and 20, see the discussion of claim 6.

22.   In regards to claim 15 and 22, Shrivastava teaches of ...verify that the node is

active and notifying the member and if node is not active to return an error

message(Col 5, lines 25-35) wherein the error message is removing the system from

the cluster.

23.   Claims 16 , 17, 23, 24, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Shrivastava and D'Souza as applied to claim 11 above, and

further in view Kamar and Strub et al (US 5974429) hereinafter Strub.

24.   In regards to claim 16 and 23 refer to the discussion of claim 9. In regards to the

remaining limitation of return an error message. Neither Shrivastava, D'Souza nor

Kamar teach explicitly on this. Strub teaches on this aspect (Col 7, lines 23-25). It

would have been obvious to one of ordinary skill in the art at the time of invention to

incorporate the teachings of Strub because the invention relates to updating software in

a clustered system. One of ordinary skill in the art at the time of invention would have

been motivated because adding an error message would indicate to the system that the

process of updating was unsuccessfully.

25.   In regard to claim 17 and 24, see discussion of claim 10. In regard to the

remaining limitation, Neither Shrivastava, D'Souza nor Kamar teach explicitly on this.

Strub teaches on this aspect (Col 7, lines 23-25). See claim 16 for motivation.

26.   Claim 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable

over D'Souza and further in view of Shrivastava as applied to claim 11 above, and

further in view of Murata.

27.   In regards to claim 14 and 21, see the discussion of claim 7.

28.   Claim 25 –29 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Shrivastava and Murata et al (US 6505257) and Eitner, and further in view of

D'Souza.

29.   In regards to claim 25, Shrivastava teaches of : a plurality of nodes, each having

resident thereon cluster infrastructure software (Fig 2); program code resident on the

plurality of nodes (Col 3, lines 50-55), and the program code further configured to notify

the group of the update to the cluster infrastructure software after the cluster

infrastructure software has been updated in each of the plurality of nodes, and to

dynamically update a cluster infrastructure version used by the group to that of the

updated cluster infrastructure software (Col 6, lines 19-41). Shrivastava does not

explicitly teach of the remaining limitations. In an analogous art, Murata teaches of the

a group including a plurality of group members resident on the plurality of individual

nodes (Col 1, lines 57-60), wherein the group members is the job components that are

distributed among the various processors; and, program code configured to shutdown

and restart individual nodes among the plurality of nodes (Col 2, lines 1-7) wherein

shutting down is " the acceptance of a new job in the selected cluster is inhibited" and

restart is " acceptance of a new job is permitted," Murata is silent in regards to the

remaining limitations. In an analogous art, Eitner teaches of maintaining the group in

an active state while updating (Col 4, lines 49-53). Eitner is also silent in regards to the

remaining limitations. In an analogous art, D'Souza teaches of updating to incorporate

different program code (Col 9, lines 30-32). It would have been obvious to one of

ordinary skill in the art at the time of invention to incorporate the teachings for the

reasons discussed in claim 1. See claim 1 for motivation.

30.   In regards to claim 26, see the discussion of claim 2.

31.   In regards to claim 27, see the discussion of claim 6.

32.   In regards to claim 28, see the discussion of claim 7.

33.   In regards to claim 29, see the discussion of claim 15.

34.   Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Shrivastava and Murata and Eitner, and D'Souza and further in view

Kamar and Strub et al (US 5974429) hereinafter Strub.

35.   In regards to claims 30 and 31, refer to the discussion of claim 16 and 17.

Conclusion

36.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

37.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Cheryl M. Reid whose telephone number is 571 272

3903. The examiner can normally be reached on Mon- Fri (7-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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cmr

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PRIMARY EXAMINER